Peptide News™

September 2011

Peptide News from AAPPTec features current news of interest to peptide and protein chemists and scientists who utilize peptides in their research. Included are reports of interesting new peptides, new techniques for peptide and protein synthesis, biologically active peptides and potential peptide pharmaceuticals. Peptide News also features publications by AAPPTec customers, recent citings of AAPPTec products in the literature, as well as special offers on AAPPTec products. Please submit any interesting paper you would like to share.

Upcoming Events

Fall 2011 ACS National Meeting.
August 28 - September 1, Denver, CO
VISIT US IN BOOTH 608!

Dynamics Within and Between Proteins
August 31 - September 2, U. of Essex, U.K.

21st Polish Peptide Symposium
September 4 - 8, Suprasi, Bialystok, Poland

Spanish Society for Biochemistry & Molecular Biology
September 5-8, Barcelona, Spain

48th Japanese Peptide Symposium
September 28 - 29, Sapporo, Japan

AAPPTec All About Peptides

AAPPTec is all about peptides. AAPPTec provides the products you need to obtain high quality peptides including custom peptides, peptide synthesizers, peptide synthesis resins, Fmoc-amino acids, Boc-amino acids, unusual amino acids, lyophiliziers, HPLC systems and columns.

AAPPTec is your complete peptide source.

Peptide and Protein Techniques

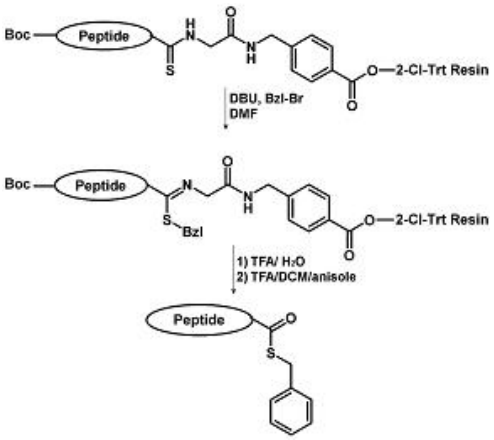
RTZ 001 2-Cl-Trt Chloride Resin (2-CTC Resin)

Available in 100-200 mesh, 1% DVB cross-

Direct Fmoc-Chemistry-Based Solid-Phase Synthesis of Peptidyl Thioesters

Indrajeet Sharma and David Crich. J. Org. Chem., 2011, 76, 6518-6524

Attachment of a growing peptide chain to a glycylaminomethyl resin via a thioglycinamide bond is compatible with Fmoc-chemistry solid-phase peptide synthesis.



For more articles on Peptide and Protein Techniques, please click here.

New Peptides

Synthesis and Diuretic Activities of Pseudoproline-Containing Analogues of the Insect Kinin Core Pentapeptide

Zhang B, Gong J, Yang Y, Dong S. J. Pept. Sci. 2011 Aug 1. doi: 10.1002/psc. 1396 [Epub ahead of print]

C-2 dimethylated/unmethylated thiazolidine-4-carboxylic acid and C-2 dimethylated oxazolidine-4-carboxylic acid were introduced into the insect kinin core pentapeptide in place of Pro(3), yielding three new analogues.

For more articles on New Peptides, please click here.

linked beads from AAPPTec

25g - $125
100g - $325

2-Chlorotrityl chloride resin allows peptide products to be cleaved from the support without removing the sidechain protecting groups. 2-Cl-Trt chloride resin is ideal for preparing protected peptide fragments for coupling to form larger and small proteins. The steric bulk of the 2-Cl-Trt resins prevents diketopiperazine formation, even when the C-terminal is proline. 2-Cl-Trt chloride resin is the resin of choice for preparing peptides with C-terminal cyclic residues such as Pro, Hyp, and Tic.

AAPPTec Asp and Glu Derivatives for Peptide Synthesis

ABD125 Boc-Asp(OtBu)-OH

5g - $70
25g - $250

ABE125 Boc-Glu(OtBu)-OH

5g - $50
25g - $180

Boc-Asp(OtBu)-OH and Boc-Glu(OtBu)-OH are ideal products for efficiently preparing the N-terminal Asp and Glu peptide fragments recently utilized in peptide ligation protocols to prepare larger peptides and small proteins. The peptide fragments can be prepared on Wang resin or Rink amide resin with Fmoc-amino acids up to the N-terminal Asp or Glu, which is attached as Boc-Asp(OtBu)-OH or Boc-Glu(OtBu)-OH. Cleavage of the peptide from the resin at the same time removes the N-terminal and sidechain protection groups, producing the peptide fragment for further elaboration through ligation.

Therapeutic Peptides

Evaluation of the Antioxidant Peptide SS31 for Treatment of Burn-induced Insulin Resistance.

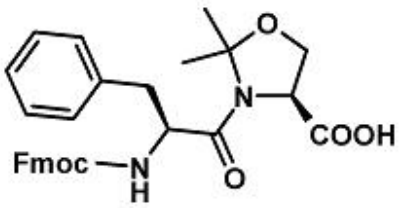
Carter EA, Bonab AA, Goverman J, Paul K Yerxa J, Tompkins RG, Fischman AJ, Int. J. Mol. Med., 2011 28, 589-94. doi:10.3892/ijmm.2011.752.Epub 2011 Jul 19.

After severe burn injury and other major traumas, glucose tolerance tests demonstrate delayed glucose disposal. This 'diabetes of injury' could be explained by insulin deficiency. Studies have shown that soon after trauma, insulin concentrations are reduced in the face of hyperglycemia. These studies confirmed that SS31 can be used to reverse burn-induced insulin resistance and provide a firm pre-clinical basis for future clinical trials of SS31 for the treatment of insulin resistance in patients with burn injury.

For more articles on Therapeutic Peptides, please click here.

Pseudoproline Dipeptides from AAPPTec

PPD109 Fmoc-Phe-Ser(ΨMe,Me)pro-OH
1g - $50
5g - $200



Other pseudoproline dipeptides are available at the same price. To view AAPPTec's full range of pseudoproline dipeptides, visit our

Focus XC (6) Automated Peptide Synthesizer

The Focus XC (6) solid phase peptide synthesizers have the capacity and operational flexibility to allow you to use special reagents for selected couplings. In the standard configuration, Focus XC (6) Peptide Instruments have six separate reaction vessels, two 5-liter solvent/reagent bottles, one 2-liter solvent/reagent bottle, two 1-liter solvent/reagent bottles, and twenty-four 90 mL reactant vessels that may be used for amino acid monomers and special reagents. Optional configurations can have 36 or 48 reactant vessels or other combinations of solvent/reagent bottles.

Optional deprotection monitoring with the heating and sonication options also contribute to the Focus XC peptide synthesizers' high performance. With the automatic deprotection monitoring option, the Focus XC peptide instrument will not proceed to the next step until the current deprotection is completed, thus assuring higher yields and purer crude peptides even when couplings are slow. Sonication and heating increase reaction yields of difficult couplings. Focus XC peptide synthesizers apply heat and sonication only during specified steps in the peptide synthesis to prevent damaging side reactions to the peptide during synthesis.

The Focus XC (6) solid phase peptide

website at www.peptide.com.

Fmoc-Phe-Ser(ΨMe,Me)pro-OH is utilized to prepare a bioactive analog of the Insect Kinin Core Pentapeptide. The Phe-pseudoproline bond is locked into active cis configuration, whereas the native Phe-Pro bond is only 33% cis.

This is yet another application of pseudoproline dipeptides. Originally developed by Mutter for preparing long or difficult peptides (Mutter M., et al. Pept. Res. 1995, 8, 145, Wohr T., et al. J Am Chem Soc 1996, 118, 9218, White P, et al. J Pept. Sci. 2004, 10,18), pseudoproline dipeptides are also utilized to improve solubility of aggregation-prone peptides, to promote cyclization of linear peptides and to prevent aspartamide formation at Asp-Ser sequences. AAPPTec provides the largest selection of high purity pseudoproline dipeptides at the affordable prices of 1g-$50, 5g-$200.

synthesizer from AAPPTec is the ideal peptide instrument for saving time, cutting costs, improving yields and increasing productivity in your laboratory. For more information about the Focus XC (6) and other AAPPTec peptide instruments, visit our website at www.aapptec.com.

Custom Peptide Synthesis GMP Peptides

At AAPPTec, peptides are not just our business, they are our passion. We strive to quickly produce and deliver the highest quality custom peptides at very competitive prices. We utilize the latest technologies to produce not just simple peptides, but difficult peptides, long peptides, and derivatized peptides. We can incorporate N-terminal and C-terminal modifications; dye, biotin and fluorescent labels; phospho amino acids and non-standard amino acids.

Some of the custom peptides in which we excel:

- Stapled peptides
- PEGylated peptides
- Long or difficult peptides
- Biotin or FITC-labeled peptides

AAPPTec also can provide GMP peptides for biological testing.

For a quotation, email your sequence, the amount of peptide, and the purity level you require to sales@aapptec.com.

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